

What is claimed is:

1. In a method of building a tire having a tread region presenting a tread cap, the improvement comprising the following steps:

- (a) forming the tire with the tread region;
- (b) forming the tread cap as a non-marking tread cap; and
- (c) integrating the tread cap with the tread region of the tire concurrent with the manufacture of the tire.

2. The method of building a tire according to Claim 1, wherein the tread cap comprises natural and synthetic rubber, ethylene propylene rubber, carbon black, and rubber oil.

3. The method of building a tire according to Claim 1, wherein the tread cap comprises one or more of the following, zinc oxide, stearic acid, sulphemamide, mercapto benzothiazole, thiuram, insoluble Sulfur and Sulfur.

4. The method of building a tire according to Claim 1, wherein the tread cap comprises one or more of the following polybutadiene rubber, white carbon, tackifier, microcrystallized wax, antioxidant and antiozonant.

5. The method of building a tire according to Claim 1, wherein the tread cap consists of natural and synthetic rubber, ethylene propylene rubber, polybutadiene rubber, carbon black, white carbon, rubber oil (paraffinic oil), zinc oxide, stearic acid, tackifier, microcrystallized wax, antioxidant, antiozonant, sulphemamide, mercapto benzothiazole, thiuram, insoluble Sulfur and Sulfur.

6. The method of building a tire according to Claim 1, wherein the step (a) of forming the tire with the tread region comprises creating a green tire without the tread cap, wherein the step (c) of integrating the tread cap with the tread region of the tire concurrent with the manufacture of the tire comprises providing the non-marking tread cap to said green tire, the method further comprising the step (d) of curing the green tire with the tread cap to create a tire having the tread cap of a non-marking composition.

7. The method of building a tire according to Claim 1, comprising the further step of coloring the tread cap for creating a colored, non-marking tread cap.

8. In a method of building a pneumatic tire having a tread region presenting a tread cap, the improvement comprising the following steps:

- (a) forming the tire with the tread region;

(b) forming the tread cap as a non-marking tread cap comprising a step of forming the tread cap as a non-marking tread cap comprising between 30-70 parts of natural and synthetic rubber, 20-50 parts of ethylene propylene rubber, 11-60 parts of carbon black, 11-60 parts of white carbon, and 7.5-12.5 parts of rubber oil, the parts being parts by weight of the tread cap; and

(c) integrating the tread cap with the tread region of the tire concurrent with the manufacture of the tire.

9. The method of building a tire according to Claim 8, the tread cap further comprising 1-5 parts of zinc oxide, 0-1 parts of stearic acid, 7-30 parts of tackifier, 7-12 parts of microcrystallized wax, 1-5 parts of antioxidant, 1-5 parts antiozonant, 0-1 parts of sulphemamide, 0-1 parts of mercapto benzothiazole, 0-1 parts of thiuram, 0-1 parts of insoluble Sulfur and 0-2 parts of Sulfur.

10. The method of building a tire according to Claim 8, the tread cap further comprising a colorant for creating a colored, non-marking tread.

11. The method of building a tire according to Claim 8, wherein the step (a) of forming the tire with the tread region comprises creating a green tire without the tread cap, wherein the step (c) of integrating the tread cap with the tread region of the tire concurrent with the manufacture of the tire comprises providing the non-marking tread cap to said green tire, the method further comprising the step (d) of curing the green tire with the tread cap to create a tire having the tread cap of a non-marking composition.

12. A tire made by the process of Claim 1.

13. The tire of Claim 12, wherein the tread cap comprises natural and synthetic rubber, ethylene propylene rubber, carbon black, and rubber oil.

14. The tire of Claim 12, wherein the tread cap comprises one or more of the following, zinc oxide, stearic acid, sulphemamide, mercapto benzothiazole, thiuram, insoluble Sulfur and Sulfur.

15. The tire of Claim 12, wherein the tread cap comprises one or more of the following polybutadiene rubber, white carbon, tackifier, microcrystallized wax, antioxidant and antiozonant.

16. The tire of Claim 12, wherein the tread cap consists of natural and synthetic rubber, ethylene propylene rubber, polybutadiene rubber, carbon black, white carbon, rubber oil (paraffinic oil), zinc oxide, stearic acid, tackifier, microcrystallized wax, antioxidant, antiozonant, sulphemamide, mercapto benzothiazole, thiuram, insoluble Sulfur and Sulfur.

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17. The tire of Claim 12, the non-marking tread cap comprising between 30-70 parts of natural and synthetic rubber, 20-50 parts of ethylene propylene rubber, 11-60 parts of carbon black, 11-60 parts of white carbon, and 7.5-12.5 parts of rubber oil, the parts being parts by weight of the tread cap.

5 18. The tire of Claim 17, the tread cap further comprising 1-5 parts of zinc oxide, 0-1 parts of stearic acid, 7-30 parts of tackifier, 7-12 parts of microcrystallized wax, 1-5 parts of antioxidant, 1-5 parts antiozonant, 0-1 parts of sulphemamide, 0-1 parts of mercapto benzothiazole, 0-1 parts of thiuram, 0-1 parts of insoluble Sulfur and 0-2 parts of Sulfur

19. The tire of Claim 18, wherein the tire is a bias tire.

10 20. The tire of Claim 19, further comprising a colorant for creating a colored, non-marking tread.

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